

Table 10.1 presents a tentative estimate of project completion for the above priorities. Project scheduling will be largely controlled by funds availability, including grant administration cycles. Figure 10.1a shows the proposed 4a-1 project, including the UV disinfection system, and the 4a-1 distribution system improvements.

Priority	Project Component	Estimated Project Year ¹
Phase 4a-1		
Priority #1	Installation of UV disinfection system	2012
Priority #2	Improvements to the drinking water distribution system (Replace 4-inch lines for fire flows)	2012
Phase 4a-2		
Priority #3	New Water Treatment Plant to meet 2018 Design Conditions	2014
Priority #4	Repair of Key Deficiencies in BIA Water Treatment Plant and Decommission Tribal Treatment Plant	2014
Phase 4b		
Priority #5	Add Capacity To New Treatment Plant To Meet 2028 Design Conditions	2018
Priority #6	Decommission BIA Water Treatment Plant	2018
Priority #7	Phase 2 of Distribution System Improvements	2018
Priority #8	Water meter installation	ongoing

10.3 COSTS

Construction costs for projects presented in the 2008 PER were projected to May 2012. However, due to the change in scheduling, costs will be projected to May of the year listed in Table 10.1 for each priority. Table 10.2 presents the revised project costs.

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Priority	Project Component	Cost ¹
Phase 4a-1		
Priority #1	Installation of UV disinfection system	\$653,000
Priority #2	Improvements to the drinking water distribution system (Replace 4-inch lines for fire flow)	\$1,508,000
-	Contingency (20%)	\$432,000
40	Total Construction Cost (Projected to May 2012)	\$2,593,000
	Engineering (~20%) ²	\$519,000
	Administrative Costs (~5%)	\$130,000
	Subtotal	\$3,242,000
	WPA (TERO) fees ⁴	\$93,000
	Total Phase 4a-1 Project Cost, 2012 dollars	\$3,335,000
Phase 4a-2		
Priority #3	New Water Treatment Plant to meet 2018 Design Conditions	\$6,761,000
Priority #4	Repair of Key Deficiencies in BIA Water Treatment Plant and Decommission Tribal Treatment Plant	\$675,000
	Contingency (20%)	\$1,487,000
	Total Construction Cost (Projected May 2014) ³	\$8,923,000
	Engineering (~20%) ⁴	\$1,785,000
	Administrative Costs (~5%)	\$446,000
	Subtotal	\$11,154,000
	WPA (TERO) fees⁴	\$321,000
	Total Phase 4a-2 Project Cost, 2014 dollars	\$11,475,000
Phase 4b		
Priority #5	Add Capacity To New Treatment Plant To Meet 2028 Design Conditions	\$3,471,000
Priority #6	Decommission BIA Water Treatment Plant	\$152,000
Priority #7	Phase 2 of Distribution System Improvements	\$968,000
	Contingency (20%)	\$918,000
	Total Construction Cost (Projected May 2018) ³	\$5,509,000
	Engineering (~20%) ⁴	\$1,102,000
	Administrative Costs (~5%)	\$275,000
	Subtotal	\$6,886,000
	WPA (TERO) fees ⁴	\$198,000
	Total Phase 4b Project Cost, 2018 dollars	\$7,084,000

^{1.} See Section 8.2 of the 2008 PER for further explanation of cost estimate approach.

^{2.} Costs for technical services are based on a percent of total construction for budgeting purposes only. Final costs for technical services will be negotiated during the final design phase of the project and may vary depending on actual site conditions, availability of existing data, the final scope of services, etc.

^{3.} The construction cost projection to future years assumes a 3% increase in costs per year. If project scheduling changes in the future, these numbers should be adjusted to match the actual construction time frame.

^{4.} The Tribe's Workforce Protection Act (WPA) requires that 3% of contract values be paid to the Tribal Employment Rights Office (TERO). This amount was calculated exclusive of Administrative Costs, as these costs are expected to be primarily related to Tribal staff rather than an outside contractor.

11111	TABLE 10.2 ESTIMATED WATER SYSTEM IMPROVEMENTS COSTS	
Priority	Project Component	Cost ¹
Phase 4a-1		
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10.4 FINANCIAL REQUIREMENTS AND FUNDING

Funding sources were discussed in detail in Chapter 10 of the 2008 PER and will not be repeated here. Funding for the projects identified as Phase 4a-1 is anticipated to come from a combination of grant and loan programs identified in the 2008 PER. Specifically, a potential funding package for the 4a-1 project is as follows in Table 10.3:

TABLE 10.3 PROPOSED SOURCES OF FUNDING FOR 4A-1 PROJECT			
Source	Due Date for Application	Amount	
STAG and WRDA Grants	Submitted, March 1, 2010	\$400,000	
US EPA Tribal Set-Aside Grant	Submitted, March 15, 2010	\$650,000	
MT TSEP Grant	April 16, 2010	\$750,000	
MT Coal Board Grant	May 1, 2010	\$199,500	
MT RRGL Grant	May 15, 2010	\$100,000	
US HUD ICDBG Grant	August 1, 2011	\$1,100,000	
	Grant Subtotal	\$3,199,500	
USDA Rural Development Loan	Anytime; 2.625% interest	\$135,500	
	Total	\$3,335,000	

10.4.1 Utility Rate Charges

As stated in the 2008 PER, the Tribe feels that due to the high poverty rate and low median income of the residents of Crow Agency, that rate increases that would be required to cover a loan would create an unacceptable financial burden on the residents of Crow Agency. The Tribe plans to pay off any loan taken out from its General Fund, and to collect user rates of \$45.00 as suggested by Rural and Tribal Environmental Solutions, Inc. (RATES), who the Tribe hired to develop rates for the Apsaalooke Water and Wastewater Authority.

For reference, included below is a calculation of what rates would be required if the project were financed with only grants and loans, with no cash allocation from the Tribe's General Fund.

The impact on utility rates as a result of implementing the project can be estimated but cannot be determined exactly. This is primarily due to the fact that the exact effect on existing utility rates is dependent on the success of future grant and loan applications. To initially assess potential effects on utility rates, it has been assumed that the Tribe's contribution will be financed through an USDA RD loan, with a 2.625% interest rate, and a term of 20 years. A coverage factor of 125% has been used.

Table 10.4 presents project costs, assumptions, and monthly user rates based on these costs and assumptions. The rates shown are specific to the funding scenario. Actual, total rates will be dependent on operating costs and retirement of current debt service obligations.

Three funding scenarios are presented:

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Three funding scenarios are presented:

- 1. No grant funds (\$0) are obtained and the entire project is financed with a loan of \$3,335,000.
- 2. A \$750,000 grant is awarded by the TSEP program, and the balance is financed with a \$2,585,000 loan.
- Entire funding package as described in Table 10.3 is secured. The balance is financed with a \$135,500 loan.

Table 10.4 presents project costs, assumptions, and monthly user rate increases for the three funding scenarios. The loan conditions of annual interest rate, term, and coverage are consistent with current Rural Development loan terms. Currently, Crow Agency has approximately 2011 water customers, and an estimated 395 Equivalent Dwelling Units, or EDUs; this is the number of users incorporated into the calculation for the estimated average cost per user. Actual total rates will be dependent on final project costs, water utility operating costs, and retirement of current debt service obligations. The Tribe obtained a loan from USDA Rural Development for Phases 1 and 2 construction (for the interceptor sewer and new wastewater lagoons). However, as stated above, the Tribe pays the debt service incurred from this loan with monies from its General Fund rather than increasing user rates to offset or pay the debt service.

TABLE 10.4 PHASE 4A IMPROVEMENTS ESTIMATE OF IMPACT ON USER RATE			
	Scenario 1	Scenario 2	Scenario 3
Total Project Cost	\$3,335,000	\$3,335,000	\$3,335,000
	\$0	\$750,000	\$3,199,500
Total Grants Total Cost to be Financed	\$3,335,000	\$2,585,000	\$135,500
Loan Conditions			
Annual Rate	2.625%	2.625%	2.625%
Term (Years)	20	20	20
Coverage	125%	125%	125%
Total Annual Cost	\$270,581	\$209,731	\$10,994
Total Cost Per user Per Month			
Current number of "EDUs"	395	395	395
Estimated Monthly Avg. Cost Increase Per User	\$57.08	\$44.25	\$2.32
	\$102.08	\$89.25	\$47.32
Total Rate	\$43.01	\$43.01	\$43.01
Target Rate % of Target Rate	237%	208%	110%

10.5 SITE LOCATION AND CHARACTERISTICS

A location north of the treatment plants on the west side of the access road is proposed for the UV building. At this site the UV building would be located next to the combined

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